AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings include changes to Figure 1. This sheet, which includes Figure 1, replaces the original sheet including Figure 1, adding reference number 52.

Attachment: Replacement Sheet for Figure 1

Annotated Sheet for Figure 1 Showing Changes

REMARKS

This is a Response to the Office Action dated October 4, 2004.

Upon entry of this Response, claims 10, 26-34 and 36-43 will be pending in the Application.

In the outstanding Office Action, the Examiner objected to the drawings; rejected claims 10 and 26-43 under 35 U.S.C. 112, second paragraph, as being indefinite; and rejected claims 10 and 26-43 under 35 U.S.C. 102(a) as being anticipated by Teramoto (U.S. Patent No. 5,722,441).

Rejection under 35 U.S.C. 102

The Examiner rejected claims 10 and 26-43 under 35 U.S.C. 102(a) as being anticipated by Teramoto (U.S. Patent No. 5,722,441), hereinafter referred to as " Teramoto."

Specifically, the Examiner stated that

> Teramoto discloses a process apparatus for processing semiconductor wafers. The reference discloses the storage tank, the filter, the circulating pump, the pipe, and measuring the physical properties as claimed. The reference discloses the monitoring, the computer, and the concentration detecting spectroscope, and detecting the density as claimed. See the abstract, the claims, Figs. 3-6, col. 2, lines 54-67, col. 3, lines 5-9, col. 5, lines 57-62, col. 6, lines 53-57, col. 7, line 1- col. 9, line 36.
>
> Re claims 32-34, 37-38 measuring the electrical conductivity, measuring opacity, measuring refractive index, measuring fluidity, and the speed of sound, are all inherent characteristic in the Teramoto apparatus. The concentration detecting unit and the contaminating matter detecting unit taught by Teramoto may be able to perform said measuring.

Applicants respectfully traverse the rejection of claims 10 and 26-43 under 35 U.S.C. 102(a).

Teramoto, as understood, is directed to processing semiconductor wafers, and uses a near infrared ray transmission spectrometry tuned to a narrow frequency range for specific constituents contained in the process solution. Applicants note that a spectroscope operates by taking a single reading, with "peaks" in the readings corresponding to the constituent elements. Using an algorithm, the concentration of each of the constituent elements is obtained. While Teramoto discloses a means for detecting density (col. 2, line 59) such means is not explained. For use in the process taught by Teramoto, since the spectroscope can be used to calculate constituent concentration,

Applicants do not understand why this additional calculation is required. As to alternate measuring devices other than a spectroscope, Teramoto discloses a pH meter or a titrator. Applicants submit that due to the high concentrations of caustic materials and high temperatures, a pH meter simply cannot be configured to operate with the present invention. Similarly, a titrator cannot be used to measure constituents for a continuing process and is also not feasible. Therefore, Teramoto, as applied to the present invention, is limited to use of a spectroscope.

In contrast, independent claim 10 recites analysis equipment for determining a chemistry of an organic component and a caustic component of a reusable organic caustic solution, the analysis equipment comprising: an autoclave containing a metallic component and the reusable organic caustic solution at elevated temperature and pressure, the reusable organic caustic solution having been utilized for at least one cycle of removing a ceramic coating from the metallic component; a storage tank for storing the reusable organic caustic solution after removal from the autoclave; a filter for removing particles of the ceramic coating dispersed in the reusable organic caustic solution from the reusable organic caustic solution; a pump for circulating the reusable organic caustic solution from the tank through the filter; a pipe connecting the storage tank to the pump, the pump to the filter and the filter to the storage tank; and at least two sensors positioned between the filter and the storage tank to measure at least two physical properties of the reusable organic caustic solution after removal of the particles from the reusable organic caustic solution, the at least two physical properties selected from the group consisting of electrical conductivity, opacity, refractive index, density, fluidity and the speed of sound in the solution.

In contrast, independent claim 31 recites analysis equipment for determining a concentration of an organic component and a caustic component of a reusable organic caustic solution, the analysis equipment comprising: an autoclave containing a metallic component and the reusable organic caustic solution at elevated temperature and pressure, the reusable organic caustic solution having been utilized for at least one cycle of removing a ceramic coating from the metallic component; a storage tank for storing the reusable organic caustic solution after removal from the autoclave; a filter for removing particles of the ceramic coating dispersed in the reusable organic caustic solution from the reusable organic caustic solution; a pump for

circulating the reusable organic caustic solution from the tank through the filter; a pipe connecting the storage tank to the pump, the pump to the filter and the filter to the storage tank; and at least two sensors positioned between the filter and the storage tank, each of the at least two sensors for measuring a physical property of the reusable organic caustic solution after removal of the particles from the reusable organic caustic solution, the physical property associated with the concentration of at least one of the organic component and the caustic component of the reusable organic caustic solution, the physical property selected from the group consisting of electrical conductivity, opacity, refractive index, density, fluidity and the speed of sound in the solution.

Several of the features recited by Applicant in independent claims 10 and 31 as amended are not taught by Teramoto. First, Teramoto does not teach a reusable organic caustic solution for removing a ceramic coating from a metallic component as recited by Applicants in independent claims 10 and 31. In addition, Teramoto does not teach or suggest at least two sensors for measuring physical properties selected from the group consisting of electrical conductivity, opacity, refractive index, density, fluidity and the speed of sound in the solution. A spectroscope takes a single reading (i.e., a single sensor) and does not require additional sensors as in the present invention. Further, concentration spectrometry is clearly different from a sensor measuring any of electrical conductivity, opacity, refractive index, density, fluidity and the speed of sound in the solution. Further, the readings measured by the at least two sensors of the present invention must be combined to obtain the concentrations of the constituents in the solution.

It is noted that the Examiner's rejections relies on the doctrine of inherency. MPEP 2112 sets forth the law on inherency. Inherency is not to be taken lightly and not to be asserted unless there is good evidence to suggest that the asserted property or characteristic is necessarily present in the teachings of the prior art reference. The concept of inherency is not provided as a way to fill in the gaps in missing disclosure or teachings based upon speculation, unless the asserted property or characteristic may be shown to be necessarily present by objective evidence. Instead, "inherency" is used when <u>every aspect of the disclosure of a reference and the claimed subject matter are otherwise exactly the same</u>, then it may be inferred that some property or characteristic further recited in the claim must necessarily be present in the art reference. (Emphasis added). MPEP 2112 provides "The fact that a certain result or characteristic <u>may</u>

occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). (emphasis in MPEP). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)." (emphasis in original).

Applicant respectfully disagrees with the Examiner's conclusion that "measuring the electrical conductivity, measuring opacity, measuring the fluidity, and the speed of sound, are all inherent characteristics in the Teramoto apparatus as recited by Applicants in independent claims 10 and 31. Applicants submit that not only does a spectroscope operate differently from the sensors measuring physical characteristics recited in independent claims 10 and 31, but the spectroscope requires only one "sensor", while the present invention requires at least two sensors, hence the cancellation of claim 35.

The Examiner is requested to provide the basis in fact or technical reasoning that the Teramoto device using a spectroscope measures solution constituents in a manner that is inherently characteristic of the present invention. There is nothing in Teramoto to support this assertion as the spectroscope in Teramoto is not "inherently characteristic" of the sensors measuring different physical attributes of solution of the present invention.

For the reasons discussed above, Teramoto and the present invention cannot remotely be considered exactly the same in every aspect, and the doctrine of inherency cannot be inferred. Further, Teramoto conspicuously lacks a second sensor which is an explicit limitation in both independent claims 10 and 31. Therefore, for the reasons given above, independent claims 10

and 31 are believed to be distinguishable from Teramoto and therefore are not anticipated nor rendered obvious by Teramoto.

Dependent claims 26-30 are believed to be allowable as depending from what is believed to be allowable independent claim 10, and claims 32-34 and 36-43 are believed to be allowable as depending from what is believed to be allowable independent claim 31 for the reasons given above. In addition, claims 26-30, 32-34 and 36-43 recite further limitations that distinguish over the applied art.

In conclusion, it is respectfully submitted that claims 10 and 26-30, 32-34 and 36-43 are not anticipated nor rendered obvious by Teramoto and are therefore allowable.

Rejection under 35 U.S.C. 112

Claim 10 and 26-43 stand rejected under 35 U.S.C. §112 as indefinite. The Examiner noted elements were omitted for determining a concentration as claimed. In response thereto, independent claims 10 and 31 were amended in a manner Applicants believe bring claims 10, 26-34 and 36-43 in conformance with 35 U.S.C. §112. No new matter has been added in amending these claims.

In the Drawings

The drawings were objected to as failing to comply with 37 CFR 1.84(p)(5) as reference number 52 recited in the specification did not appear in the drawings. In response thereto, reference number 52 has been added to Figure 1. Therefore, Applicants believe that the drawings are now in compliance with 37 CFR 1.84. No new matter has been added in amending Figure 1.

In the Specification

The abstract was objected to as not including the analysis equipment as claimed as required by MPEP 608.01(b). In response thereto, a replacement abstract has been provided. Therefore, Applicants believe that the abstract is now in compliance with MPEP 608.01. No new matter has been added in amending the specification.

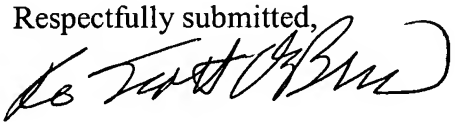
The title was objected to as being not descriptive. In response thereto, a replacement title has been provided. Therefore, Applicants believe that the title is now in compliance.

CONCLUSION

In view of the above, Applicants respectfully requests reconsideration of the Application and withdrawal of the outstanding objections and rejections. As a result of the amendments and remarks presented herein, Applicants respectfully submit that claims 10, 26-34 and 36-43 are not anticipated by nor rendered obvious by Teramoto, and thus, are in condition for allowance. As the claims are not anticipated by nor rendered obvious in view of the applied art, Applicants request allowance of claims 10, 26-34 and 36-43 in a timely manner. If the Examiner believes that prosecution of this Application could be expedited by a telephone conference, the Examiner is encouraged to contact the Applicants' attorney at the below listed address.

The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to Deposit Account No. 50-1059.

Respectfully submitted,



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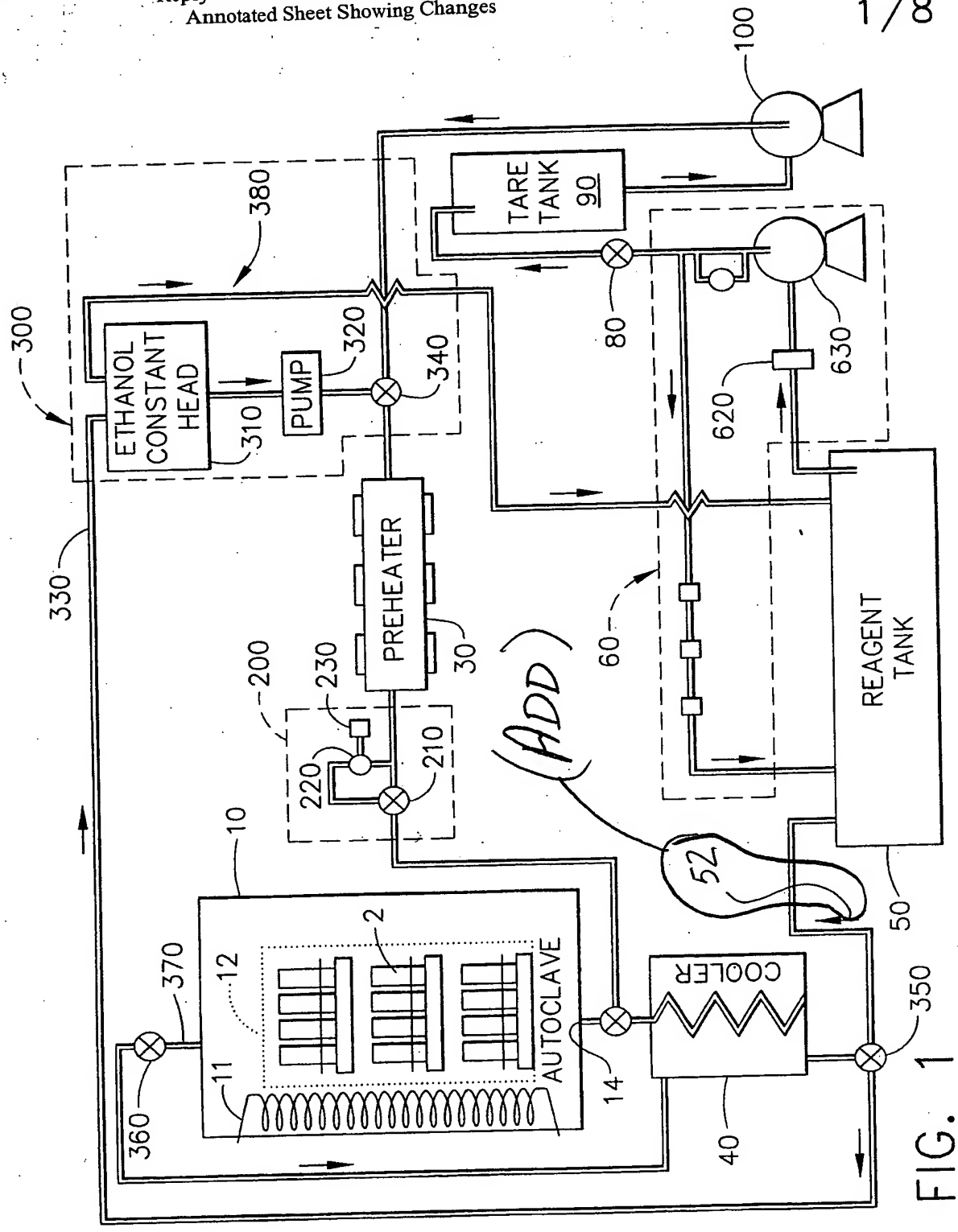

FIG. 1